BOBBY JINDAL GOVERNOR



HAROLD LEGGETT, Ph.D. SECRETARY

State of Louisiana

DEPARTMENT OF ENVIRONMENTAL QUALITY ENVIRONMENTAL SERVICES

Certified Mail No.

Agency Interest (AI) No. 2418 Activity No. PER20080031

Mr. Chris Chandler Refinery Manager ConocoPhillips Company P.O. Box 176 Belle Chasse, LA 70037

RE: Prevention of Significant Deterioration (PSD) Permit, Alliance Refinery, ConocoPhillips

Company, Belle Chasse, Plaquemines Parish, Louisiana

Dear Mr. Chandler:

Enclosed is your permit, PSD-LA-75(M-3). Construction of the proposed project is not allowed until such time as the corresponding Part 70 Operating Permit is issued.

Please be advised that pursuant to provisions of the Environmental Quality Act and the Administrative Procedure Act, the Department may initiate review of a permit during its term. However, before it takes any action to modify, suspend or revoke a permit, the Department shall, in accordance with applicable statutes and regulations, notify the permittee by mail of the facts or operational conduct that warrant the intended action and provide the permittee with the opportunity to demonstrate compliance with all lawful requirements for the retention of the effective permit.

Should you have any questions, contact Corbet Mathis of the Air Permits Division at (225) 219-3126.

Sincerely,

Cheryl Sonnier Nolan Assistant Secretary

Needs PN

Date

CSN:CMM

c: US EPA Region VI

PUBLIC NOTICE

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY (LDEQ) CONOCOPHILLIPS COMPANY, ALLIANCE REFINERY UNIT 1291 - FLUIDIZED CATALYTIC CRACKING UNIT AND UNIT 301 - BOILERS UNIT PROPOSED PART 70 AIR OPERATING RENEWAL/MODIFICATION AND PSD MODIFICATION PERMITS

The LDEQ, Office of Environmental Services, is accepting written comments on the Part 70 Air Operating Renewal/Modification and PSD Modification Permits for ConocoPhillips Company, P.O. Box 176, Belle Chasse, LA 70037 for the Alliance Refinery, Unit 1291 - Fluidized Catalytic Cracking Unit and Unit 301 - Boilers Unit. The facility is located at 15551 Highway 23 approximately 10 miles south of Belle Chasse on the westside of the Mississippi River near Myrtle Grove, Plaquemines Parish.

ConocoPhillips' Alliance Refinery produces a wide range of petroleum products from crude oil, such as motor gasoline, jet fuel, diesel fuel, LPG, carbon black feedstock, propane, and coke. It also produces by-product elemental sulfur and petrochemicals such as benzene, toluene, and xylene. The 1291 Fluidized Catalytic Cracking Unit (FCCU) converts gas oils into gasoline by splitting long-chain hydrocarbons under low pressure, high temperature conditions using a fluidized bed catalytic process. The 301-Boilers Unit generates steam used throughout the refinery for powering rotating equipment, providing process heat, and for fire protection. ConocoPhillips requested to incorporate requirements mandated by the Consent Decree for the FCCU, regenerators, and Carbon Monoxide (CO) Boilers; permit the FCC Regenerator Vent, Emission Point No. 301-D-3, for emissions from Start-Ups and Shutdowns; update combustion emission speciation based on factors from API publication 348; incorporate specific conditions for the NOX reduction from the Ultra Low NOX Burners installed on the FCCU Light/Heavy Feed Heater, Emission Point No. 1291-H-2/3; and renew the Part 70 Operating Permit.

Pollutant	<u>Before</u>	<u>After</u>	Change	
PM ₁₀	440.67	441.63	+ 0.96	
SO ₂	3,700.91	3709.68	+ 8.77	
NO _X	1,370.34	1371.37	+ 1.03	
CO	44.27	511.17	+466.90	
VOC*	179.52	180.98	+ 1.46	
Lead	-	0.13	+ 0.13	
Other**	223.76	271.645	+ 47.885	

*Includes a number of VOC Toxic Air Pollutants. Acetaldehyde, Acrolein, Benzene, Formaldehyde, and Hydrogen Cyanide are being increased by more than the Minimum Emission Rate (MER).

A technical review of the working draft of the proposed permit was submitted to the facility representative and the LDEQ Surveillance Division. Any remarks received during the technical review will be addressed in the "Worksheet for Technical Review of Working Draft of Proposed Permit". All remarks received by LDEQ are included in the record that is available for public review.

^{**}Includes a number of Non-VOC Toxic Air Pollutants. Arsenic, Barium, Cadmium, Chromium, Copper, Hydrochloric Acid, Manganese, Nickel, Selenium, Sulfuric Acid, and Zinc are being increased by more than the MER.

Written comments, written requests for a public hearing or written requests for notification of the final decision regarding this permit action may be submitted to Ms. Soumaya Ghosn at LDEQ, Public Participation Group, P.O. Box 4313, Baton Rouge, LA 70821-4313. Written comments and/or written requests must be received by 12:30 p.m., Monday, June 22, 2009. Written comments will be considered prior to a final permit decision.

If LDEQ finds a significant degree of public interest, a public hearing will be held. LDEQ will send notification of the final permit decision to the applicant and to each person who has submitted written comments or a written request for notification of the final decision.

The proposed Part 70 Air Operating Modification Permit, PSD Modification Permit, applications, and Statement of Basis are available for review at the LDEQ, Public Records Center, Room 127, 602 North 5th Street, Baton Rouge, LA. Viewing hours are from 8:00 a.m. to 4:30 p.m., Monday through Friday (except holidays). The available information can also be accessed electronically on the Electronic Document Management System (EDMS) on the DEQ public website at www.deq.louisiana.gov.

Additional copies may be reviewed at the Plaquemines Parish Library, Belle Chasse Branch, 8442 Hwy. 23, Belle Chasse, LA 70037.

Inquiries or requests for additional information regarding this permit action should be directed to Corbet Mathis, LDEQ, Air Permits Division, P.O. Box 4313, Baton Rouge, LA 70821-4313, phone (225) 219-3140.

Persons wishing to be included on the LDEQ permit public notice mailing list or for other public participation related questions should contact the Public Participation Group in writing at LDEQ, P.O. Box 4313, Baton Rouge, LA 70821-4313, by email at deqmaillistrequest@la.gov or contact the LDEQ Customer Service Center at (225) 219-LDEQ (219-5337).

Permit public notices including electronic access to the proposed permits and statement of basis can be viewed at the LDEQ permits public notice webpage at www.deq.louisiana.gov/apps/pubNotice/default.asp and general information related to the public participation in permitting activities can be viewed at www.deq.louisiana.gov/portal/tabid/2198/Default.aspx.

Alternatively, individuals may elect to receive the permit public notices via email by subscribing to the LDEQ permits public notice List Server at http://www.doa.louisiana.gov/oes/listservpage/ldeq pn listserv.htm.

All correspondence should specify AI Number 2418, Permit Number 1810-V3 or PSD-LA-75(M-3), and Activity Numbers PER20080001 or PER20080031.

Scheduled Publication Dates: May 16, 2009 in The Advocate and May 19, 2009 in The Plaquemines Gazette

Agency Interest No. 2418

PSD-LA-75(M-3)

AUTHORIZATION TO CONSTRUCT AND OPERATE A MODIFIED MAJOR SOURCE PURSUANT TO THE PREVENTION OF SIGNIFICANT DETERIORATIONREGULATIONS IN LOUISIANA ENVIRONMENTAL REGULATORY CODE, LAC 33:III.509

In accordance with the provisions of the Louisiana Environmental Regulatory Code, LAC 33:III.509,

ConocoPhillips Company Alliance Refinery 15551 Highway 23 Belle Chasse, LA 70037

is authorized to modify and operate the Alliance Refinery near

Belle Chasse, LA Plaquemines Parish

subject to the emissions limitations, monitoring requirements, and other conditions set forth hereinafter.

Signed th	s day of	, 2009.
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Cheryl Sonnier Nolan Assistant Secretary Office of Environmental Services Louisiana Department of Environmental Quality

BRIEFING SHEET

ALLIANCE REFINERY AGENCY INTEREST NO. 2418 CONOCOPHILLIPS COMPANY BELLE CHASSE, PLAQUEMINES PARISH, LOUISIANA PSD-LA-75(M-3)

PURPOSE

Reconciliation of the PSD Permit with the emission limits of the Title V Permit.

RECOMMENDATION

Approval of the proposed reconciliation and issuance of a permit.

REVIEWING AGENCY

Louisiana Department of Environmental Quality, Office of Environmental Services, Air Permits Division.

PROJECT DESCRIPTION

The purpose of this PSD permit reconciliation request is to revise the Sulfur Dioxide (SO₂) emission limit for the Fluid Catalytic Cracking Unit Preheater, Emission Point No. 1291-H-2/3. There was a calculation error in establishing the SO₂ emissions limit in the original PSD Permit No. PSD-LA-75 issued October 22, 1978. This PSD permit established an hourly SO₂ emission limit of 0.5 lbs/hr, which was incorrect by a factor of 10. The error was carried over into the PSD Modification, PSD-LA-75(M-2), but the emission limit was reconciled during the initial Title V permitting process. Based on the correct maximum firing rate of 180 MM BTU/hr and the NSPS 40 CFR 60 Subpart J limit for sulfur in the fuel of 0.1 grains H₂S/dscf, the original Title V Permit No. 1810-V0 issued February 27, 1998, established the proper SO₂ maximum hourly emission rate of 4.79 lbs/hr for the heater.

CO limits for the CO Boilers were overstated in the current PSD Permit, PSD-LA-75(M-2). The limit for CO in PSD Permit No. PSD-LA-75(M-2) was 1286 lb/hr. The CO limit is being decreased to 379.10 lb/hr for the CO Boilers as a result of more reliable data derived from the Continuous Emissions Monitors (CEM).

Also, the current PSD Permit did not account for start-up and shutdown conditions for the FCCU and CO Boiler. During start-up and shutdown conditions, the FCC Regenerator Vent is utilized and should have a limit for CO and SO₂.

There are no physical modifications or changes in operation with this reconciliation; therefore, a PSD analysis is not required.

BRIEFING SHEET

ALLIANCE REFINERY AGENCY INTEREST NO. 2418 CONOCOPHILLIPS COMPANY BELLE CHASSE, PLAQUEMINES PARISH, LOUISIANA PSD-LA-75(M-3)

TYPE OF REVIEW

The requested permit was reviewed in accordance with PSD regulation for CO and SO₂ emissions.

BEST AVAILABLE CONTROL TECHNOLOGY

The selection of best available control technology for CO and SO₂ emissions was based on using a "top-down" approach. There are no significant emission increases with this reconciliation. No new BACT analysis is required for this PSD modification.

CO Boilers controlling the FCCU Regenerator Vent and Vortometric High Intensity Combustion Units equipped on the CO Boilers and FCCU Light/Heavy Feed Heater is determined as BACT for CO emissions. A limit of 0.1 gr/dscf of H₂S in the fuel gas based on NSPS, Subpart J requirements for the CO boiler and FCCU Light/Heavy Feed Heater is determined as BACT for SO₂ emissions.

AIR QUALITY IMPACT ANALYSIS

An air quality analysis was not required for this modification

ADDITIONAL IMPACTS

An additional impact analysis was not required for this modification.

PROCESSING TIME

Application Dated:

January 21, 2008

Application Received:

January 22, 2008

Additional Information Dated:

February 5, 2009 and April 23, 2009

Effective Completeness Date:

April 6, 2009

BRIEFING SHEET

ALLIANCE REFINERY AGENCY INTEREST NO. 2418 CONOCOPHILLIPS COMPANY BELLE CHASSE, PLAQUEMINES PARISH, LOUISIANA PSD-LA-75(M-3)

PUBLIC NOTICE

A notice requesting public comment on the permit was published in *The Advocate*, Baton Rouge, on XXXXXXX, and in *The Plaquemines Gazette*, Belle Chasse, on XXXXXXX, and submitted to the Plaquemines Parish Library on XXXXXXXX. A copy of the public notice was mailed to concerned citizens listed in the Office of Environmental Services Public Notice Mailing List on XXXXXXXX. The draft permit was also submitted to US EPA Region VI on XXXXXXX (e-mailed). All comments will be considered prior to a final permit decision.

Alliance Refinery
Agency Interest No.: 2418
ConocoPhillips Company
Belle Chasse, Plaquemines Parish, Louisiana
PSD-LA-75(M-3)
April 6, 2009

I. APPLICANT

ConocoPhillips Company Alliance Refinery P.O. Box 176 Belle Chasse, LA 70037

II. LOCATION

ConocoPhillips Company owns and operates a petroleum refinery located in Belle Chasse, Louisiana. The adjoining property to the north of the ConocoPhillips-Alliance Refinery is owned by British Petroleum (BP). Adjoining properties to the south are owned by Mississippi River Grain Elevator, MISSALCO, and Louisiana Citrus Lands, Inc. and are used for a grain elevator and alcohol plant, and pasture lands, respectively. The refinery is bounded by the Mississippi River to the east and Highway 23 to the west. Property west of Highway 23 is owned by Tosco and BP. This property is used as pasture land. Approximate UTM coordinates are 211.520 Kilometers East and 3287.014 Kilometers North, Zone 16.

III. PROJECT DESCRIPTION

ConocoPhillips Company operates Unit 1291 - Fluid Catalytic Cracking Unit (FCCU) and Unit 301 - Boilers Unit at the Alliance Refinery. These units currently operate under Part 70 Operating Permit No. 1810-V2 issued January 30, 2007, and Prevention of Significant Deterioration (PSD) Permit No. PSD-LA-75-M-2 issued October 13, 1987. PSD Permit No. PSD-LA-75 authorized to expand the FCCU capacity from 78,000 to 89,000 barrels of fresh feed per stream day.

Unit 1291 - Fluidized Catalytic Cracking Unit (FCCU) converts gas oils into gasoline by splitting long-chain hydrocarbons under low pressure, high temperature conditions using a fluidized bed catalytic process. Processing sections of the unit include the cracking section, fractionator section, and the recovery gas section.

Unit 301 - Boilers Unit generates the steam used throughout the refinery for powering rotating equipment, providing process heat, and for fire protection. Unit air emissions are from two CO boilers fired by the FCCU regenerator flue gas supplemented with refinery fuel gas, and one supplemental boiler fired by refinery fuel gas. Other emissions result from fugitive VOC from the boiler unit piping system.

The purpose of this PSD permit reconciliation request is to revise the Sulfur Dioxide (SO₂) emission limit for the Fluid Catalytic Cracking Unit Preheater, Emission Point No. 1291-H-2/3. There was a

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calculation error in establishing the SO₂ emissions limit in the original PSD Permit No. PSD-LA-75 issued October 22, 1978. This PSD permit established an hourly SO₂ emission limit of 0.5 lbs/hr, which was incorrect by a factor of 10. The error was carried over into the PSD Modification, PSD-LA-75(M-2), but the emission limit was reconciled during the initial Title V permitting process. Based on the correct maximum firing rate of 180 MM BTU/hr and the NSPS 40 CFR 60 Subpart J limit for sulfur in the fuel of 0.1 grains H₂S/dscf, the original Title V Permit No. 1810-V0 issued February 27, 1998, established the proper SO₂ maximum hourly emission rate of 4.79 lbs/hr for the heater.

CO limits for the CO Boilers were overstated in the current PSD Permit, PSD-LA-75(M-2). The limit for CO in PSD Permit No. PSD-LA-75(M-2) was 1286 lb/hr. The CO limit is being decreased to 379.10 lb/hr for the CO Boilers as a result of more reliable data derived from the Continuous Emissions Monitors (CEM).

Also, the current PSD Permit did not account for start-up and shutdown conditions for the FCCU and CO Boiler. During start-up and shutdown conditions, the FCC Regenerator Vent is utilized and should have a limit for CO and SO₂.

There are no physical modifications or changes in operation with this reconciliation; therefore, a PSD analysis is not required.

IV. SOURCE IMPACT ANALYSIS

A proposed net increase in the emission rate of a regulated pollutant above de minimis levels for new major or modified major stationary sources requires review under Prevention of Significant Deterioration regulations, 40 CFR 52.21. PSD review entails the following analyses:

- A. A determination of the Best Available Control Technology (BACT);
- B. An analysis of the existing air quality and a determination of whether or not preconstruction or postconstruction monitoring will be required;
- C. An analysis of the source's impact on total air quality to ensure compliance with the National Ambient Air Quality Standards (NAAQS);
- D. An analysis of the PSD increment consumption;
- E. An analysis of the source related growth impacts;
- F. An analysis of source related growth impacts on soils, vegetation, and visibility;
- G. A Class I Area impact analysis; and
- H. An analysis of the impact of toxic compound emissions.

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A. BEST AVAILABLE CONTROL TECHNOLOGY

Under current PSD regulations, an analysis of "top down" BACT is required for the control of each regulated pollutant emitted from a modified major stationary in excess of the specified significant emission rates. The top down approach to the BACT process involves determining the most stringent control technique available for a similar or identical source. If it can be shown that this level of control is infeasible based on technical, environmental, energy, and/or cost considerations, then it is rejected and the next most stringent level of control is determined and similarly evaluated. This process continues until a control level is arrived at which cannot be eliminated for any technical, environmental, or economic reason. A technically feasible control strategy is one that has been demonstrated to function efficiently on identical or similar processes. Additionally, BACT shall not result in emissions of any pollutant which would exceed any applicable standard under 40 CFR Parts 60 and 61.

For this reconciliation, no new BACT analysis was required.

BACT analyses for CO

Alliance refinery has two CO Boilers to control Carbon Monoxide (CO) from the Fluid Catalytic Cracking Unit regenerator. The CO Boilers generated steam by utilizing the CO rich gas from the regenerator as fuel and converting it to CO₂.

The CO Boilers and the FCCU Light/Heavy Feed Heater are equipped with Vortometric high intensity combustion units, which have been proven to provide complete and smokeless combustion with all types of gaseous and liquid fuels. CO emissions are minimized with this type of burner design.

The use of the CO boilers to control CO emissions from the FCCU regenerator is determined as BACT. Vortometric high intensity combustion units equipped on the CO boilers and FCCU Light/Heavy Feed Heater is determined as BACT.

BACT analyses for SO₂

The CO Boilers and FCCU Light/Heavy Feed Heater comply with the provisions of NSPS 40 CFR 60 Subpart J, which require the use of low sulfur fuels. For the CO Boilers and FCCU Light/Heavy Feed Heater, complying with Subpart J and burning low sulfur fuels is determined as BACT.

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B. ANALYSIS OF EXISTING AIR QUALITY

PSD Regulations require an analysis of existing air quality for those pollutant emissions which increase significantly from a proposed major source. No additional air analysis was required for this modification.

C. NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS) ANALYSIS

No additional NAAQS analysis was required for this reconciliation.

D. PSD INCREMENT ANALYSIS

No additional Increment analysis was required for this reconciliation.

E. SOURCE RELATED GROWTH IMPACTS

ConcoPhillips is proposing to reconcile the PSD Permit limits to match the limits in the Title V Permit; therefore, there will be no effects on residential growth or industrial/commercial development in Plaquemines Parish.

F. SOILS, VEGETATION, AND VISIBILITY IMPACTS

The reconciliation will not impair visibility, soils, or vegetation in Plaquemines Parish.

G. CLASS I AREA IMPACTS

The reconciliation does not require any Class I area analyses (deposition, ozone, or visibility).

H. TOXIC EMISSIONS IMPACT

This PSD modification does not increase any toxic pollutants.

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V. CONCLUSION

The Office of Environmental Services, Permits Division, has made a preliminary determination to approve the reconciliation of the emissions from the Fluid Catalytic Cracking Unit at the Alliance Refinery near Bell Chasse in Plaquemines Parish, Louisiana, subject to the attached specific and general conditions. In the event of a discrepancy in the provision found in the application and those in this Preliminary Determination Summary, the Preliminary Determination Summary shall prevail.

SPECIFIC CONDITIONS

Alliance Refinery Agency Interest No.: 2418 ConocoPhillips Company Belle Chasse, Plaquemines Parish, Louisiana PSD-LA-75(M-3)

The permittee is authorized to construct and operate subject to the following limitations. These
emission limitations represent the maximum emission allowed for the specified pollutants. Fuel
gas burned in any fuel gas combustion device shall not contain hydrogen sulfide in excess of 0.10
grains per dry standard cubic foot. The permittee is authorized to operate under the following
conditions.

MAXIMUM ALLOWABLE EMISSIONS RATES						
Emission Point No.	Description		SO ₂	СО		
301-D-3	Fluid Catalytic Cracking Unit Regenerator Vent (Normal Operation)	Lb/hr	0.00	0.00		
301-D-3	Fluid Catalytic Cracking Unit Regenerator Vent (Start-Up and Shutdown)	Lb/hr	1417.20	16674.18		
1291-H-2/3	FCCU Light/Heavy Feed Heater	Lb/hr	4.79	0.55		
301-B-2A	CO Boiler	Lb/hr	1286.00	379.10		
301-B-2B	CO Boiler	Lb/hr	1286.00	379.10		

The fluid catalytic cracking unit shall continue to exhaust the carbon monoxide rich gases to the carbon monoxide boilers under normal operation, and will not exhaust the fluid catalytic cracking unit gas stream directly to the atmosphere.

- 2. Demonstration of compliance with the emission limitations in Condition No. 1 shall be determined by test methods and procedures as set out in 40 CFR 60.8(f). In addition, the demonstration of compliance with carbon monoxide emission limitation shall be determined by the test methods and procedures as outlined in 40 CFR 60.106(d) and the demonstration of compliance with the sulfur dioxide and hydrogen sulfide emission limitation shall be determined by the test methods and procedures as outlined in 40 CFR 60.106(e).
- 3. The permittee is authorized to operate the modification permitted herein 24 hours per day for 365 days per year for each year of its operation.

SPECIFIC CONDITIONS

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Belle Chasse, Plaquemines Parish, Louisiana
PSD-LA-75(M-3)

- 4. The permittee shall effectively monitor the operation and efficiency of all control equipment. The permittee shall record the average coke burn-off rate, the hours of operation, the daily rate of fuel combustion and excess oxygen, and sulfur compound emissions as required in 40 CFR 60.105(c), 40 CFR 60.105(d), 40 CFR 60.105(e), and 40 CFR 60.105(e)(3). In addition, the permittee shall continuously monitor and record SO₂ emissions per 40 CFR 60.105(a)(3).
- 5. Each emission point for which an emission test method is established in Condition No. 2 of this permit shall be tested during normal maximum operating conditions in order to determine compliance with the emission limitations contained herein within sixty (60) days of achieving the maximum production rate, but in no event later than 180 days after initial start-up of the permitted facility. The permittee shall notify the permitting authority of the scheduled date of compliance testing at least thirty (30) days in advance of such test. Compliance test results shall be submitted to the permitting authority within forty-five (45) days after the compliance testing. The permittee shall provide (1) sampling ports adequate for test methods applicable to such facility, (2) safe sampling platforms, (3) safe access to sampling platforms, and (4) utilities for sampling and testing equipment.
- 6. The permittee shall retain records of all information resulting from monitoring activities required by Condition No. 2 of this permit, and information indicating operating parameters as specified in Condition No. 3 of this permit, for a minimum of two (2) years from the date of recording.
- 7. If, for any reason, the permittee does not comply with or will not be able to comply with the emission limitations specified in this permit, the permittee shall provide the permitting authority with the following information in writing within five (5) days of such condition:
 - a. Description of non-complying emission(s),
 - b. Cause of non-compliance,
 - c. Anticipated time the non-compliance is expected to continue or, if corrected, the duration of the period of non-compliance,
 - d. Steps taken by the permittee to prevent recurrence of the non-complying emissions.
- 8. Permittee shall comply with the Louisiana General Conditions as set forth in LAC 33:III.537.